

**1. A method comprising:**

receiving a polling request that specifies a first temporal period and a first temporal offset for a plurality of expected future transmissions from a first station; and establishing a polling schedule based on said polling request.

**2. The method of claim 1 wherein said first temporal offset is relative to a beacon.**

**3. The method of claim 1 further comprising transmitting a poll to said first station in accordance with said polling schedule, wherein the transmission of said poll and the reception of said polling request are via a shared-communications channel.**

**4. The method of claim 3 wherein the transmission of said poll and the reception of said polling request are in accordance with an IEEE 802.11 protocol.**

**5. The method of claim 1 further comprising:**

receiving a plurality of frames for forwarding to said first station;  
determining whether the arrival times of said frames are substantially periodic as described by a second temporal period and a second temporal offset; and  
establishing, when the arrival times of said frames are substantially periodic, a transmission schedule for transmitting each of said frames to said first station;  
wherein said transmission schedule is based on said second temporal period and said second temporal offset.

**6. The method of claim 5 wherein said second temporal offset is relative to a beacon.**

**7. The method of claim 5 wherein said transmission schedule is also based on said polling schedule.**

**8. The method of claim 5 further comprising combining said polling schedule and said transmission schedule into a composite schedule.**

**9. The method of claim 5 further comprising transmitting each of said frames to said first station in accordance with said transmission schedule, wherein said transmitting and said receiving said plurality of frames are via a shared-communications channel.**

**10. A method comprising:**

transmitting a polling request that specifies a temporal period and a temporal offset for a plurality of expected future transmissions;

queuing a frame in accordance with said temporal period and on said temporal offset;

receiving a poll; and

transmitting said frame in response to said poll.

**11.** The method of claim 10 wherein said temporal offset is relative to a beacon.

**12.** The method of claim 10 wherein the transmission of said polling request, the transmission of said frame, and the reception of said poll are via a shared-communications channel.

**13.** The method of claim 12 wherein the transmission of said polling request, the transmission of said frame, and the reception of said poll are in accordance with an IEEE 802.11 protocol.

**14.** An apparatus comprising:

a receiver for receiving a polling request that specifies a first temporal period and a first temporal offset for a plurality of expected future transmissions from a first station; and  
a processor for establishing a polling schedule based on said polling request.

**15.** The apparatus of claim 14 further comprising a transmitter for transmitting a poll to said first station in accordance with said polling schedule.

**16.** The apparatus of claim 15 wherein said transmitter and said receiver operate in accordance with an IEEE 802.11 protocol.

**17.** The apparatus of claim 14 wherein said receiver is also for receiving a plurality of frames for forwarding to said first station; and

wherein said processor is also for:

(i) determining whether the arrival times of said frames are substantially periodic as described by a second temporal period and a second temporal offset; and  
(ii) establishing, when the arrival times of said frames are substantially periodic, a transmission schedule for transmitting each of said frames to said first station, wherein said transmission schedule is based on said second temporal offset and said second temporal period.

**18.** The apparatus of claim 17 wherein said processor is also for combining said polling schedule and said transmission schedule into a composite schedule.

**19.** The apparatus of claim 17 further comprising a transmitter for transmitting:

(i) said poll to said first station in accordance with said polling schedule; and  
(ii) each of said frames to said first station in accordance with said transmission schedule.

**20.** The apparatus of claim 19 wherein said transmitter and said receiver operate in accordance with an IEEE 802.11 protocol.

**21.** An apparatus comprising:

a transmitter for transmitting a polling request that specifies a temporal period and a temporal offset for a plurality of expected future transmissions;  
a receiver for receiving a poll in response to said polling request; and  
a processor for queuing a frame in accordance with said temporal period and on said temporal offset.

**22.** The apparatus of claim 23 wherein said transmitter is also for transmitting said frame in response to said poll, and wherein said transmitter and said receiver operate in accordance with an IEEE 802.11 protocol.